Since September 2015, the California Dungeness Crab Fishing Gear Working Group (Working Group) has been taking steps to actively identify and be responsive to elevated risk of entanglements. The Working Group met on September 27-28, 2017, in Santa Rosa to continue developing solutions to support thriving whale populations along the West Coast and a thriving and profitable Dungeness crab fishery. A summary of the recommendations and next steps from the meeting are provided below. When finalized, a RAMP Overview document and other meeting materials will be made publicly available on the Working Group webpage:

http://www.opc.ca.gov/whale-entanglement-working-group/

- **Gear-marking Recommendation:** Over 50% of whale entanglements reported to National Marine Fisheries Service (NMFS) have been classified as “unknown” gear type, making it challenging to gather information about the origins of entanglements (e.g., fishery, gear set-up, timing, etc.). In response to this, the Working Group has recommended that the California Department of Fish and Wildlife (CDFW) and the Pacific Fisheries Management Council (PFMC) work with other fixed-gear fisheries and fisheries known to be involved in whale entanglements to establish standardized gear marking. This recommendation focuses on establishing standardized marking on surface gear.

- **Draft Risk Assessment and Mitigation Program (RAMP):** In May 2017, the group identified the need for a risk assessment tool to facilitate continual, collaborative evaluation of the risk of entanglement, as well as identified mitigation options that allow for a collaborative recommendation to CDFW regarding options to reduce risk of entanglement. This evolved into the Risk Assessment and Mitigation Program (RAMP). During the September meeting, the group agreed on a structure and function of the draft RAMP, including role/responsibilities for the experts involved (including fishermen, agencies, environmental organizations, and researchers) and tools that will be used (a risk assessment framework and management measures toolbox). The program will be tested as a pilot during the upcoming season, and is designed to be flexible and responsive to considering new information, technologies, and approaches to reducing the risk of entanglements.

- **2017-2018 RAMP Pilot:** The Working Group agreed to pilot the draft RAMP during the 2017-18 Dungeness crab fishing season. All aspects of the draft RAMP will be voluntary during this pilot phase and apply to both recreational and commercial fishing. The pilot will evaluate the RAMP structure and function, including the implementation of the tools and process for assessing circumstances where entanglement risk is elevated and, as needed, identifying possible management measures (voluntary) for the Director’s consideration. Additionally, “mock” drills to test how well the teams respond will be run in Spring 2018 (no change to fishing practices would occur during “mock” situations). The Working Group will also consider what legislative support may be suitable/helpful with certain aspects of the RAMP moving beyond the pilot. Findings from the pilot will help to further refine and inform the draft RAMP, its tools, and the program’s working assumptions and guiding principles, as needed. During the course of the pilot, 1-2 meetings may be held in port locations in an effort to share information and address questions with the fleet.
● **Collaborative Research Projects:** The Working Group will continue to support (and be involved in) collaborative research projects designed to inform the RAMP, including the risk assessment framework. These projects include:
  
  o Developing updated whale/forage models (Forney/Santora)
  o Proof of concept testing electronic reporting tools (solar logger, eCatch) to capture fishing dynamic information (in partnership with Pelagic Data Systems and Pacific States Marine Fisheries Commission; volunteer request form available)
  o Aerial/vessel surveys, start of the season (aerial) and in response to information gathering requests (Forney/MBNMS/Point Blue; funding dependent)
  o Gear modification (Nelson/Lawson)

● **Communications:** The Working Group has developed an approach to share information about their progress, including the RAMP and associated pilot, with primary target audiences (commercial/recreational fishermen, decision makers, and broader public). The Working Group plans to share information before and during the season, and will continue to maintain an open line of communication with the Oregon and Washington Working Groups.

● **Coordinating with Key Entities:** The Working Group looks forward to continuing to engage with CDFW, the California Fish and Game Commission, the Joint Committee on Fisheries and Aquaculture (the Legislature), the DCTF, and others to inform Working Group discussions and share Working Group outputs. The Working Group welcomes the opportunity to have direct communications at any time about the draft RAMP and continues to be committed to work in partnership with CDFW and the Legislature to provide recommendations to reduce whale entanglement risk.

● **Long-term Funding:** During the RAMP pilot, the costs of the program will be evaluated. The Working Group acknowledges the value of and need to seek additional long-term funding to support RAMP implementation, including research and data gathering that can help inform the risk assessment process. The group will forward an additional recommendation to CDFW and the Legislature encouraging the state to secure long-term funding. Additionally, an internal Working Group team will work on seeking grant opportunities to further this effort.

● **Requests/Recommendations to the California Dungeness Crab Task Force:** In addition to sharing the Working Group’s RAMP progress and next steps and recommendations for gear marking and funding, the Working Group will also request the following be considered during the October 16-19, 2017 DCTF meeting:
  
  o Consider potential whale-gear interactions and how they relate to changes in season openers, including domoic acid and other delays.
  
  o Support the Working Group’s efforts in reducing the risk of whale entanglements through DCTF funding, identifying this issue as a long-term priority project, etc.
  
  o Supporting the Working Group in reaching out to the fleet to share information about whale entanglements and the Working Group’s efforts.

*For more information about the Dungeness Crab Fishing Gear Working Group, please contact info@cawhalegroup.com or visit [http://www.opc.ca.gov/whale-entanglement-working-group/](http://www.opc.ca.gov/whale-entanglement-working-group/).*